

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-3 and 8-9 are presently active in this case. The present Amendment amends Claims 1-3, cancels Claims 4-7 and adds new Claims 8-9 without introducing any new matter.

The outstanding Office Action rejected Claims 4-7 for obviousness-type double patenting as unpatentable over Kikukawa et al. (U.S. Patent No. 6,515,952, herein “Kikukawa”) in view of Hosaka et al. (Japanese Publication from Applied Physics Vol. 35, 1996, pp. 443-447, herein “Hosaka”). Claims 4-7 were rejected under 35 U.S.C. §112, second paragraph, as indefinite. Claims 1-3 were rejected under 35 U.S.C. §102(b) as anticipated by the admitted “prior art.” Claims 1-3 were rejected under 35 U.S.C. §102(e) as anticipated by Hosaka. Claims 1-7 were rejected under 35 U.S.C. §102(e) as anticipated by Kikukawa.

To vary the scope of protection recited in the claims, new Claims 8-9 are added. New Claim 8 depends upon Claim 1 and recites “said recording layer further includes nitrogen as an auxiliary component.”¹ New Claim 9 depends upon Claim 1 and recites “said recording layer further includes a rare earth element as an auxiliary component.”² Since new Claims 8-9 find non-limiting support in the disclosure as originally filed, they are not believed to raise a question of new matter.³

To clarify Applicants’ invention and in order to correct minor formalities, Claims 1-3 are amended. In particular, Claim 1 amended to recite a feature of dependent Claim 2, to recite “a phase change recording layer including antimony (Sb) and indium (In).” Further,

¹ Finds non-limiting support in Applicants’ Specification as originally filed, for example in original Claim 3.

² Idem in original Claim 3.

³ See MPEP 2163.06 stating that “information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter.”

the amendments to Claims 2-3 are only formal in nature and are therefore not believed to raise a question of new matter.

In response to the obviousness-type double patenting rejection of Claims 4-7, and in response to the rejection of Claims 4-7 under 35 U.S.C. §112, second paragraph, Claims 4-7 are cancelled without prejudice or disclaimer.

In response to the rejection of Claims 1-3 under 35 U.S.C. §102(a) as being anticipated by Applicants' Specification at page 3, allegedly being "admitted prior art,"⁴ Applicants respectfully traverse the rejection. Applicants' Specification at page 3, lines 5-28 is not an admitted prior art, but discloses experiments performed by the inventors and their results, which have led to the present invention. Further, these experiments are presented under the title "Background of the invention" and not "Prior Art." Applicants further disclose at page 7, lines 5-13 of the present Application that "it is unknown in the prior art that when microscopic recorded marks are formed in Ge-Sb-Te base recording layers, the shape and size of recorded marks are substantially affected by coarse crystal grains." Accordingly, Applicants confirm that the teachings of page 3 is not prior art, and therefore respectfully request withdrawal of the rejection of on that basis.

In response to the rejection of Claims 1-3 under 35 U.S.C. §102(b) over Hosaka, Applicants respectfully request reconsideration of this rejection and traverse the rejection, as discussed next.

Briefly recapitulating, Applicants' invention, as recited in amended Claim 1, relates to an optical recording medium having a phase change recording layer containing antimony (Sb) and indium (In) as a main component, in which recorded marks having a shortest length of up to 350 nm are formed, wherein said recording layer does not include silver (Ag).

As explained in Applicants' Specification at page 4, lines 13 to 24, Applicants' invention improves upon background optical recording media, since it can provide a phase

⁴ See the outstanding Office Action at page 5, lines 1-10.

change optical recording medium capable of forming microscopic recorded marks which are stabilized in shape and size with improved thermal stability.

Turning now to the applied reference, Hosaka discloses a nanometer-sized phase-change recording method using a recording layer of 30nm thickness.⁵ Hosaka teaches that a film made of Ge, Sb and Te (Germanium, Antimony, and Tellurium) is used.⁶ However, Hosaka fails to teach a phase change recording layer including antimony (Sb) and indium (In) as a main component, as claimed by Applicants. Hosaka is entirely silent on the use of indium.

Therefore, the applied reference fails to teach or suggest every feature recited in Applicants' claims, so that Claims 1-3 are believed to be patentably distinct over the applied references. Accordingly, Applicants respectfully traverse, and request reconsideration of, the rejection based on Hosaka.⁷

In response to the rejection of Claims 1-7 under 35 U.S.C. §102(e), in view of amended Claim 1, Applicants traverse the rejection and request reconsideration of the rejection. The applied reference Kikukawa discloses a recording layer using Ag, In, Sb and Te (Silver, Indium, Antimony and Tellurium) as main components. However, Kikukawa fails to disclose a phase change recording layer including antimony (Sb) and indium (In) as a main component, in which recorded marks having a shortest length of up to 350 nm are formed, wherein said recording layer does not include silver (Ag), as claimed. Therefore Applicants believe that the rejection over Kikukawa is overcome.

Applicants respectfully note that the present inventors were under an obligation to assign the invention to the same assignee of the Kikukawa application at the time the present invention was made. Accordingly, Applicants respectfully submit that the Kikukawa

⁵ See Hosaka in the Abstract.

⁶ See Hosaka at page 444, paragraph 2.2, lines 1-15.

⁷ See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

reference cannot be used as a primary or secondary reference in a 35 U.S.C. §103(a) rejection.

Consequently, in view of the present Amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-3 and 8-9 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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